

**Final White Paper**

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**Title: Circulating American Magazines**

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# Summary

The *Circulating American Magazines* Project addresses the critical absence of reliable circulation information by digitizing data publishers submitted to the Audit Bureau of Circulations (A.B.C.), building a robust database of circulation data covering the period 1919 to 1972.

Circulation has always been a problem for anyone interested in periodicals. From advertisers, who demanded accurate circulation information for commercial purposes, to scholars, who struggle to present accurate information about magazine history and influence, circulation data has remained difficult to obtain and verify. Scholars, for example, often have had to depend on unreliable and anecdotal circulation numbers cited in letters or memoirs. Tired of depending on magazines to self-disclose circulation information, early twentieth-century advertisers in the United States joined together to form the Audit Bureau of Circulations (A.B.C.), an organization that solicited reports and audited circulation numbers for major magazines starting in 1914. If a magazine sought to attract major advertisers, it joined the A.B.C. and provided detailed reports every six months. These reports included issue-by-issue circulation figures, as well as a host of demographic information, including newsstand and subscription sales broken down by state. These reports represent the most detailed and granular information available on magazine circulation in the United States in the twentieth century.

Unfortunately, A.B.C. data remain difficult to access and, as a result, have received little scholarly attention. The A.B.C. issued a number of summary reports that reside in libraries across the country, but these reports synthesize and interpret data without presenting any original data sets. Copies of original publisher's reports reside in the *A.B.C. Blue Book, Periodical Publisher's Statements*, thick, bound blue volumes held in a handful of research libraries (including the Library of Congress and the Center for Research Libraries), but have remained virtually invisible to scholars because they are largely held off site and catalogued in a cryptic fashion. Our project, *Circulating American Magazines*, addresses the critical absence of reliable circulation information by digitizing data from the A.B.C., building a robust database of Audit Bureau of Circulations data covering the period 1919-1972. These reports include issue-by-issue circulation of major national magazines as well as geographical distribution when reported.

The project site offers a host of visualizations with immense value for scholarly inquiry. The visualization interface is dynamic and interactive, allowing users to call up titles for comparison or to toggle between longitudinal charts and geographic ones. Time series charts render the circulation of one or two magazines over time. Choropleths chart magazine sales across the United States in real and proportional numbers, allowing scholars to understand the cycles of distribution and the expansion of magazines across the country. Users have opportunities to examine more granular data: the geographical distribution of subscriptions versus newsstand sales.

The Co-Directors of this project are Brooks Hefner, Professor of English at James Madison University, and Ed Timke, Instructor for the Innovation & Entrepreneurship Initiative and the Department of Cultural Anthropology at Duke University. Hefner and Timke, along with a team of technical experts, have developed this project in an effort to offer possibilities for research and visualization that answer significant temporal, geographical, and comparative questions about periodical history. Whether framed in terms large or small, the kinds of scholarship that are likely to grow out of this project would radically alter the landscape of twentieth-century American periodical studies. The project's centralization of circulation data allows students and scholars to see American periodical history in radically new ways, describing periodicals' development with an accuracy that has not been possible before.

The main project site for *Circulating American Magazines* can be found [here](#), and the raw data can be found [here](#).

# Project History

*Circulating American Magazines* traces its origins back to the 2015 National Endowment for the Humanities summer institute [City of Print](#), held in New York City. At this institute, hosted by Mark Noonan of the New York City College of Technology, co-directors Brooks Hefner and Ed Timke first met over a mutual interest in the history of U.S. periodicals. In the following year, Hefner and Timke reconnected over a shared interest in data collected by the Audit Bureau of Circulations. Hefner had begun to collect some of this data to support research into pulp magazines, while Timke had been researching the history of audit bureaus in the United States, Canada, and France. Working with library staff at James Madison University--including Kevin Hegg and Yasmin Shorish--the groundwork for *Circulating American Magazines* was laid during 2016, and the project team applied for a NEH Digital Humanities Advancement Grant in early 2017.

After receiving word that the project had been funded, work began in earnest. While Hefner had collected some initial data by photographing a handful of publisher's reports held at the Library of Congress, the data collection process lasted considerably longer. During the grant period (extended 18 months over the original 24-month period), Hefner, Timke, and students supervised by Timke at the University of California, Berkeley, took over 25,000 photographs of publisher's reports found in the Audit Bureau of Circulations *Blue Book of Publisher's Statements*, rare volumes held in only a handful of repositories. Many of these were taken by Hefner and Timke during a visit to the Library of Congress during November 2017, but more trips were made to the Library of Congress to fill in gaps. During this first trip to the Library of Congress, Hefner and Timke discovered that the library was missing a number of volumes from its run of 1924 through 1972 (the oldest and most recent volumes held there). The team discovered that some of these missing volumes were held by the Center for Research Libraries, the University of Chicago, and Emory University. Using a combination of site visits and interlibrary loan, Hefner and Timke secured the remainder of the missing volumes and photographed relevant reports. A handful of volumes remained elusive, but Hefner and Timke gained access to these--as well as data from 1919-1923--at the headquarters of the Alliance for Audited Media, the current iteration of the Audit Bureau of Circulations in the summer of 2018. The project site includes a [complete census](#) of these volumes and their known locations.

Because of the sheer volume of data being collected, digitization proceeded alongside the data collection. The reports were issued in a physical format that made it impossible for machines to read them, so human labor was necessary to enter every figure. While Hefner and Timke focused primarily on entering issue-by-issue data for each title, students at James Madison University; the University of California, Berkeley; and, later, Duke University worked on entering geographical data points appearing in the publisher's reports. Each report featured about 100 different data points, and, working with Kevin Hegg, Hefner and Timke developed a workflow in Google Sheets that used a combination of protected cells and an autosum formula

for subtotals (featured on the original reports) to ensure quality control for the geographical data entry. Over the 42-month grant period, the project team entered over half a million rows of data. Once a title was complete, data was compiled into CSV and JSON files by Kevin Hegg and prepared for the data visualization and an archival library of data hosted on the Open Science Framework, which is run by the Center for Open Science, a non-profit seeking to make research and data sustainable and accessible to the general public.

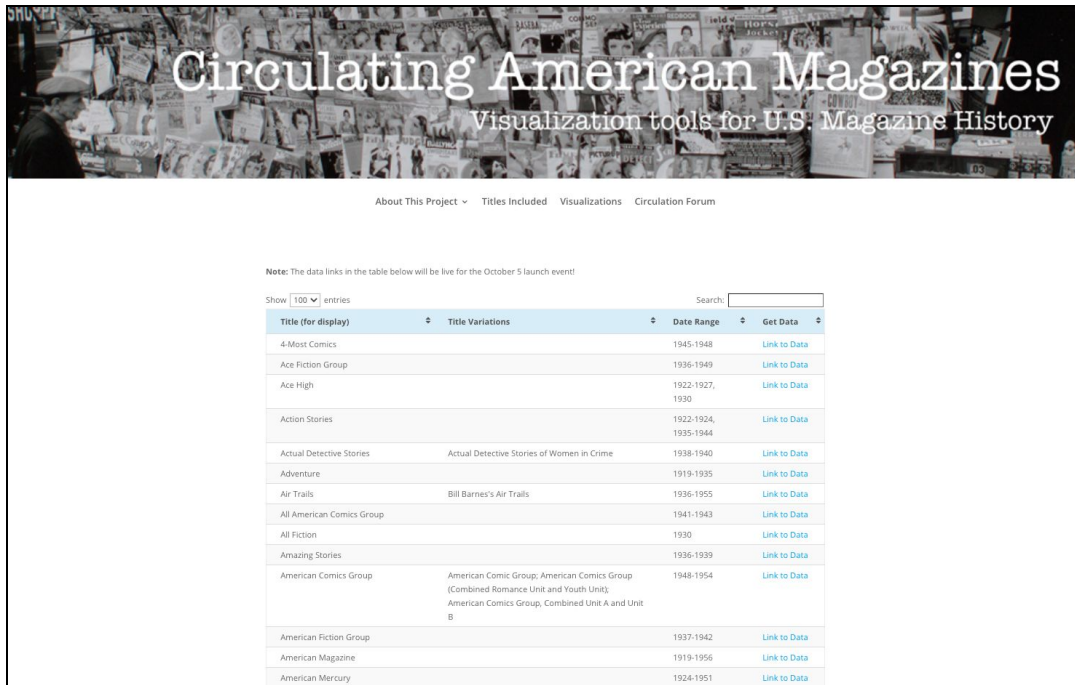
As data collection and digitization continued, data visualization specialist Ricky Holtz developed a custom, open-source visualization tool in GitHub. The team was committed to an open source option for this (rather than a third-party software like Tableau), because we wanted the tool to remain stable even if the university subscription to a third-party software was terminated. This tool was especially complex, as it needed to render all issue data and geodata simultaneously, while allowing for user interactivity. During this process, Hefner and Timke consulted the project's Advisory Board of periodical scholars, soliciting feedback for information and tools they would find most valuable for understanding the data. The most difficult implementation was a comparative visualization, which would allow for two titles to appear simultaneously. This version of the visualization tool finally debuted in early 2020.

The original date for a project launch was postponed due to COVID-19, but this allowed Hefner and Timke to spend the summer of 2020 diligently proofing the data and ensuring the highest possible accuracy. The launch event, held on October 5, 2020, included well over 80 attendees from the United States, Canada, the United Kingdom, Australia, Serbia, and the Philippines.

# Findings and Deliverables

The project team took over 25,000 photographs of A.B.C. publisher's reports for over 230 titles covering the period 1919-1972. The data found in these photographs were then carefully examined and converted into manipulable and standardized spreadsheets through data entry. In the data entry process, the research team discovered data that would be useful for creating data visualizations and providing background information about circulation: issue-by-issue circulation, geographical circulation, issue price, publisher information, titles included in publication groups, and special notes. When possible, co-directors identified editorial figures associated with individual issues and added this to the data. Working with website and data visualization specialist Ricky Holtz, these spreadsheets were then used to develop an interactive visualization tool published on the project's website. The visualization tool provides time-series data and geographical data broken down by U.S. states and allows a comparison for up to two titles. The website also provides an [unabridged list of titles](#) with links to the spreadsheets linked to the project data archive on the Open Science Framework, which contains spreadsheets with raw circulation data. Anyone from the general public can download these spreadsheets for their own study and analysis. Below are sample screenshots of the following deliverables found on the project website: list of titles with links to download data and data visualization tools (individual title time-series and breakdown by U.S. state and two-title comparison by time and breakdown by U.S. state).

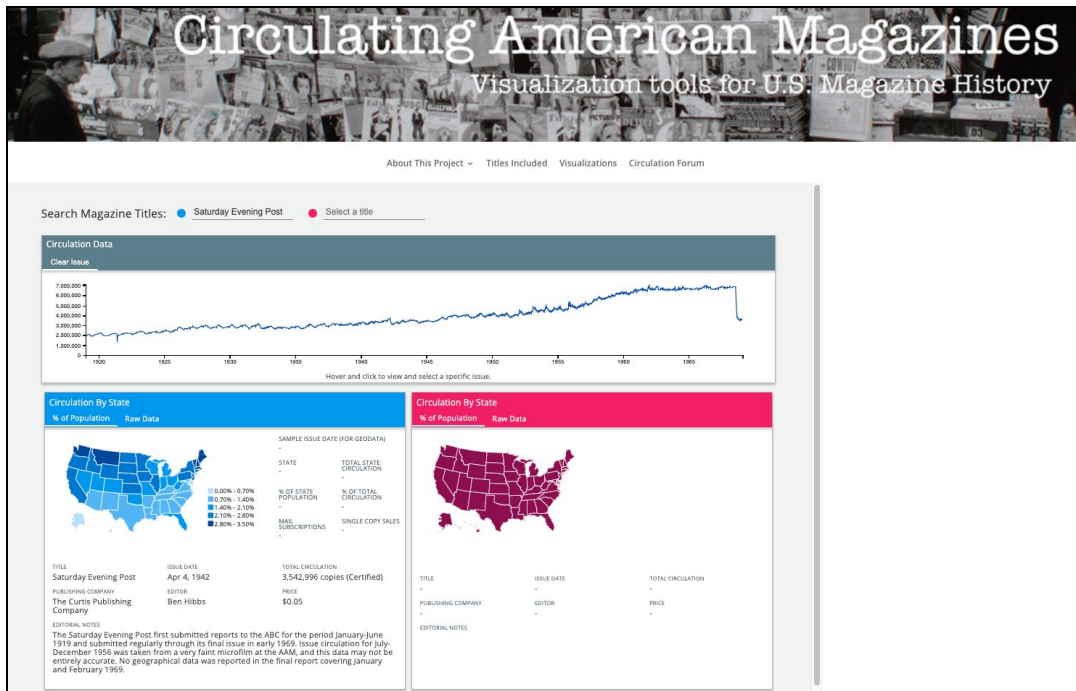
## List of Titles on Website with Links to Data Files



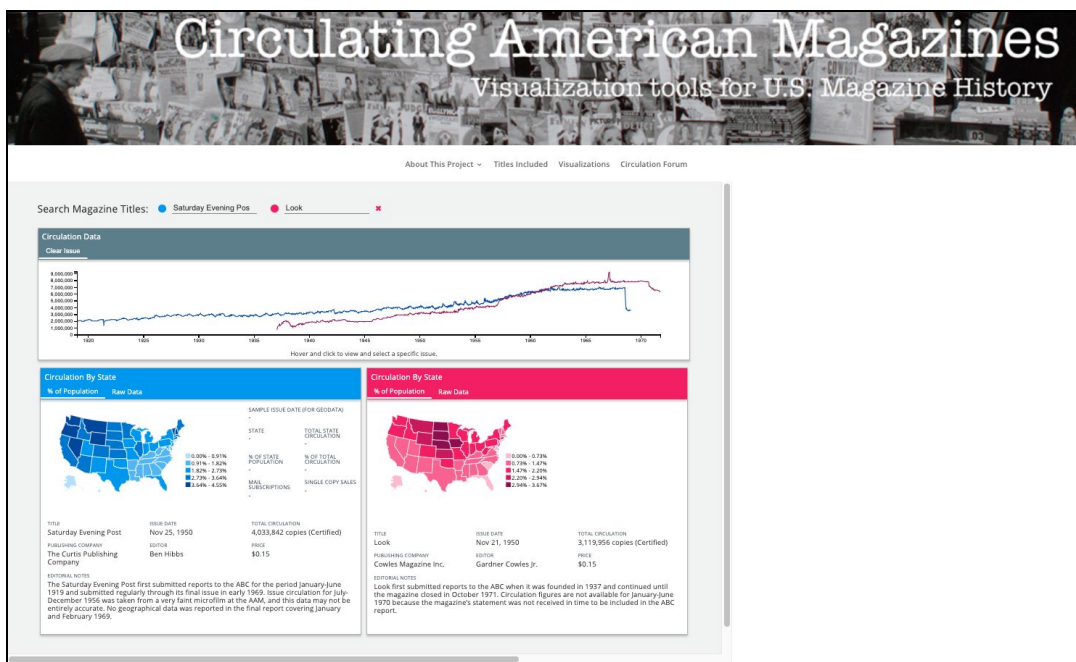
The screenshot shows the website 'Circulating American Magazines' with the subtitle 'Visualization tools for U.S. Magazine History'. The page features a navigation bar with links: 'About This Project', 'Titles Included', 'Visualizations', and 'Circulation Forum'. A note states: 'Note: The data links in the table below will be live for the October 5 launch event!'. Below the note is a table with columns: 'Title (for display)', 'Title Variations', 'Date Range', and 'Get Data'. The table lists various magazine titles and their corresponding date ranges and data links.

Title (for display)	Title Variations	Date Range	Get Data
4-Most Comics		1945-1948	<a href="#">Link to Data</a>
Ace Fiction Group		1936-1949	<a href="#">Link to Data</a>
Ace High		1922-1927, 1930	<a href="#">Link to Data</a>
Action Stories		1922-1924, 1935-1944	<a href="#">Link to Data</a>
Actual Detective Stories	Actual Detective Stories of Women in Crime	1938-1940	<a href="#">Link to Data</a>
Adventure		1919-1935	<a href="#">Link to Data</a>
Air Trails	Bill Barnes's Air Trails	1936-1955	<a href="#">Link to Data</a>
All American Comics Group		1941-1943	<a href="#">Link to Data</a>
All Fiction		1930	<a href="#">Link to Data</a>
Amazing Stories		1936-1939	<a href="#">Link to Data</a>
American Comics Group	American Comic Group; American Comics Group (Combined Romance Unit and Youth Unit); American Comics Group, Combined Unit A and Unit B	1948-1954	<a href="#">Link to Data</a>
American Fiction Group		1937-1942	<a href="#">Link to Data</a>
American Magazine		1919-1956	<a href="#">Link to Data</a>
American Mercury		1924-1951	<a href="#">Link to Data</a>

## Visualization Tools on Website: Time-Series and Cloropleth for One Title



## Visualization Tools on Website: Time-Series and Cloropleth Comparison Between Two Titles



# Dissemination

The [launch event](#), hosted by James Madison University on Zoom, on October 5, 2020 marked the official debut of the project, but dissemination about this work has been ongoing since the grant period began. This includes the following interviews:

- Megan Medieros, *Conversations with the Cohen Center* podcast, forthcoming.
- Julian Chambliss, “Brooks Hefner and Circulating American Magazines,” *Reframing History* podcast, May 5, 2020.
- Gewendolyn Purdom, “Back in Circulation,” *American Scholar*, December 4, 2017.
- Kathleen Maclay, [“Visualize This: Project Shows U.S. Magazine Evolution,”](#) *Berkeley News*, August 14, 2017.

In addition, both Hefner and Timke have been actively promoting the project at a variety of academic conferences.

- Timke, [“Digital Methods in Periodical Studies,”](#) City of Print 2020, New York, NY (held online), June 2020.
- Hefner, “Circulating American Magazines: Data-Driven Approaches to Modernist Periodical Studies,” digital session, Modernist Studies Association, Columbus, OH, November 2018.
- Hefner, “Beyond Little and Big: Circulation, Data, and American Magazine History,” Mediating American Modernist Literature: The Case of/for Big Magazines, 1880s-1960s, Aix-en-Provence, France, October 2018.
- Hefner and Timke, “Mapping Circulation: Data and American Magazine History,” Mapping the Magazine 5, Chicago, IL, July 2018.
- Timke, “The Circulating American Magazines Project: Using Audit Bureau of Circulations Data to Understand Historical Magazines Audiences,” International Communication Association Pre-Conference, San Diego, CA, May 2017.

Early successes with this project also led to invitations to serve as faculty on the 2020 *City of Print* NEH institute and as invited presenters at the COVID-delayed NEH Library Circulation Histories Workshop, to be hosted by Ball State University in spring of 2021. The American Antiquarian Society has also expressed interest in hosting a presentation highlighting the project, an event that has yet to be scheduled for later in 2021.

Hefner and Timke also expanded a presentation delivered by Hefner into an academic article, published as [“Beyond Little and Big: Circulation, Data, and American Magazine History”](#) in the *Journal of Modern Periodical Studies* 11.1 (2020): 25-51. Interest in the project also led to an invitation for Hefner to promote the project in a short article in [The Pulpster 29](#) (August 2020), the annual magazine associated with PulpFest, the nation’s largest gathering of fans and collectors of pulp magazines.

While Hefner and Timke have been promoting *Circulating American Magazines* across multiple venues and formats, the project’s [“Circulation Forum”](#) has been gathering other



periodical scholars together to explore the academic and pedagogical implications of the project. The Circulation Forum solicits short articles detailing interesting finds or uses for the data available on the project's website. To date, the Circulation Forum has featured eleven entries from scholars across the country and one scholar in Scotland. Subjects have included pulp magazines, women's magazines, comic book publishers, physical fitness magazines, "smart" literary magazines of the 1920s and 1930s, movie fan magazines, men's adventure magazines, among other topics. The co-directors of the project designed this as a space for scholars to explore the potential of the project while modeling its use for other users. Simultaneously, the Circulation Forum builds productive links with the community of scholars working in periodical studies in an effort to drive interest in and traffic to the site.

Circulation Forum posts and the project launch have been promoted using the project's social media accounts on Facebook ([facebook.com/americanmags](https://facebook.com/americanmags)) and Twitter ([@AmericanMags](https://twitter.com/AmericanMags)). Hefner and Timke plan to continue building up the Circulation Forum as a means of promoting the project and its value to the study of periodicals. In line with these goals, the project has also been submitted for peer review at MODnets, which describes itself as "a federation of digital projects in the field of modernist literary and cultural studies," as well for a number of digital humanities awards.

# Sustainability

Sustainability was a primary concern from the beginning of *Circulating American Magazines*. While this data have remained technically accessible in print volumes in off-site archival collections, our goal was to make this information more readily available for the foreseeable future. This involved developing a Data Management Plan with project team member Yasmeen Shorish and building a relationship with Brian Geiger of the Center for Open Science, a nonprofit organization dedicated to transparent research and data practices. As a result JSON and CSV files of raw project data--including both master files of all data and individual files by title--exist in multiple locations. The primary archival data reside on the Center for Open Science's Open Science Framework (OSF), a cloud-based storage framework for large data sets. Users seeking this data can access it either through a direct link to the OSF project site or, more likely, through the *Circulating American Magazines* "[Titles Included](#)" page, which features links to each individual title's folder/component.

The visualization tool runs from a separate copy of the data, housed on the visualization project's GitHub site, while the project team holds another backup copy of the data housed on the OSF. Raw data from the initial entry of circulation figures still resides on the project's Google Drive account.

We expect the data to remain on the OSF for years to come, and its security there means that, should we seek to experiment with another visualization option in 5-10 years, we can easily import this stable data set into a new tool, ensuring long-term availability of the project.

The main project site, currently built in a WordPress format and housed at James Madison University, is maintained by JMU's instructional technology team, led by project team member Kevin Hegg. The university has a strong commitment to WordPress, so its long-term availability is also guaranteed. Because of its high-profile nature, it will be attended to closely during regular WordPress upgrades at the university level.

## Future Potential

Going into the future, there is tremendous potential for teaching and scholarship. Hefner and Timke have already started to develop a community of periodical scholars who are using the data collected from the project to write short analyses of case studies, which appear on the project website in the Circulation Forum. Hefner and Timke will continue to recruit and accept Forum post manuscripts and post them to the project site over time. Moreover, Hefner and Timke will work with students using the project data to write Forum blog posts that can be shared with those consulting the site. Hefner and Timke will encourage their colleagues to consider using the site when teaching about periodicals. The hope is to feature and share findings that come through using the project site and datasets.

This project focused on data available between 1919 and 1972, but there is earlier magazine circulation data available through advertising agencies like N.W. Ayer & Son, which kept summary data for American and Canadian periodicals between 1868 and 1918. Although the data from N.W. Ayer is less granular and detailed than data submitted to the A.B.C., it still offers a glimpse of circulation patterns before 1919. Hefner and Timke have collected some of this information already and hope to include N.W. Ayer data with the existing A.B.C. data to provide circulation figures for magazines between 1868 and 1972.

Alongside national circulation figures for the United States, the A.B.C. data included some international circulation data for some titles. Timke is now working on a project that maps the international circulation data provided by Time-Life's various international titles from World War II into the early 1970s. Many titles also include Canadian circulation, which could be an important set of data to collect and share with others interested in the relationship between U.S. and Canadian media outlets. Beyond the A.B.C. data, audit bureaus from other countries provide international circulation data. There is potential to replicate the work done on this project in other countries using the circulation data available at respective national audit bureau offices. Timke and Hefner imagine advising and consulting with scholars in other countries to help create and provide resources about the international and global flows of periodicals.

In the end, the Circulating American Magazines project is just one step in increasing the public's knowledge about the reach and influence of magazines in society and culture. By continuing to share the project site and the findings that come from the data made available through this NEH grant, Hefner and Timke will stay committed to advancing the understanding of periodicals through circulation data.